

**REMARKS**

Claims 1-12 are pending. By this Amendment, claims 1, 2, 4-6, 9, 10 and 12 are amended, and claims 13 and 14 are canceled without prejudice to or disclaimer of the subject matter contained therein. Further, the specification and the drawings are corrected.

Reconsideration is respectfully requested in view of the above amendments and the following remarks below.

**I. Objection to the Specification**

The Office Action objects to the specification based on formal matters. The specification has been corrected to obviate the objection. In addition, the paragraph starting at page 21, line 21 contains a typographical error. Specifically, the phrase "the degree of coupling can be increased" should be "the degree of coupling can be lowered." Therefore, appropriate correction has been made. No new matter has been added. Accordingly, withdrawal of the objection to the specification is respectfully requested.

**II. Objection to the Drawings**

The Office Action objects to, among others, Figs. 1-3 because each reference numeral in the figures should be described in the specification. Applicant has reviewed the figures and the specification, and conclude that each reference numeral is described in the specification. Accordingly, withdrawal of the objection to the drawings based on this formal matter is respectfully requested.

The Office Action further objects to the drawings because Figs. 12A, 12B, 19A, 19B, 20, 21A, 21B, 22A, 22B, 23A and 23B should be labeled as "related art." The above figures have been labeled as "related art." Accordingly, withdrawal of the objection to the drawings with respect to this formal matter is respectfully requested.

**III. The Claims Satisfy Formal Matters**

The Office Action rejects claims 1, 2, 5, 6, 9, 10 and 12-14 based on formal matters. Claims 13 and 14 have been canceled, and thus the rejection with respect to these claims are now moot. Regarding claims 1, 2, 5, 6, 9, 10 and 12, however, these claims have been amended to obviate the rejection based on formal matters. Accordingly, withdrawal of the rejection under 35 U.S.C. §112, second paragraph, is respectfully requested.

**IV. The Claims Define Patentable Subject Matter**

The Office Action rejects claims 1-4, 11, 13 and 14 under 35 U.S.C. §102(b) over Ivanivsky (U.S. Patent No. 5,559,480); rejects claims 1, 4, 5, 6, 8, 11, 13 and 14 under 35 U.S.C. §102(b) over Uchimura (U.S. Patent No. 5,982,256); rejects claim 12 under 35 U.S.C. §103(a) over Uchimura; rejects claims 9 and 10 under 35 U.S.C. §103(a) over Uchimura in view of Takenoshita (U.S. Patent No. 6,380,825); and rejects claim 7 under 35 U.S.C. §103(a) over Ivanivsky in view of Hamasaki (U.S. Patent No. 3,265,995). The rejections are respectfully traversed.

In particular, none of the applied references disclose or suggest magnetic fields of the first and second waveguides are coupled in an E plane of the second waveguide so that the direction of the magnetic field of the magnetic electromagnetic waves propagate in the first waveguide and the direction of the magnetic field of the electromagnetic waves in another mode propagated in the second waveguide match with each other, as recited in independent claim 1.

Ivanivsky instead discloses in Fig. 1, a coupling of a stripline 11 of TEM mode and a waveguide 19 of a TE mode by short-circuiting the stripline 11 to a lower wall 21 of the waveguide 19 through a conductive strip extension 25 and a ground post 27. In particular, Ivanivsky discloses at col. 3, lines 47-50 that a coupling with the waveguide 19 is achieved

through the use of the magnetic field formed in the surrounding of the ground post 27, and this coupling is made in an H plane of the waveguide 19.

On the contrary, claim 1 recites coupling in the E plane. Therefore, Ivanivsky does not disclose or suggest the features of claim 1.

Uchimura discloses in Fig. 17 and at col. 13, lines 56-58, a coupling of a coplanar line and a waveguide in a TM mode. However, a TEM mode is not converted to other modes, as recited in claim 1. Moreover, in Uchimura, a coplanar line is not short circuited to a ground layer of the waveguide. Thus, Uchimura does not disclose or suggest the features of claim 1.

Takenoshita discloses a structure where a waveguide of TE mode is branched on the same plane. This structure is completely different from that claimed in claims 9 and 10, where a plurality of waveguides of TEM mode are a stacking structure. Thus, even if Ivanivsky and Takenoshita were to be combined, the combination does not disclose or suggest the features of claims 9 and 10.

Hamasaki discloses a conductive tuning screw. Thus, even if Hamasaki were to be combined with Ivanivsky, the combination does not disclose or suggest the features of claim 7.

Therefore, independent claim 1 defines patentable subject matter. Claims 2-12 depend on independent claim 1, and therefore also define patentable subject matter, as well as for the other features they recite. Therefore, withdrawal of the rejection under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) is respectfully requested.

**V. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-12 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

  
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Attachments:  
Replacement Sheets

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**Amendments to the Drawings:**

The attached replacement drawing sheets make changes to Figs. 12A and 12B, Figs. 19A and 19B, Figs. 20, 21A and 21B, Figs. 22A and 22B and Figs. 23A and 23B, and replace the original sheets with the above-mentioned figures.

Attachment: Replacement Sheets